

Measuring Public Health Meaningful Use

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Meaningful Use for Public Health Professionals: Basic Training

May 16, 2011 – CDC

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Disclaimer

- ❑ **The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.**



Introduction

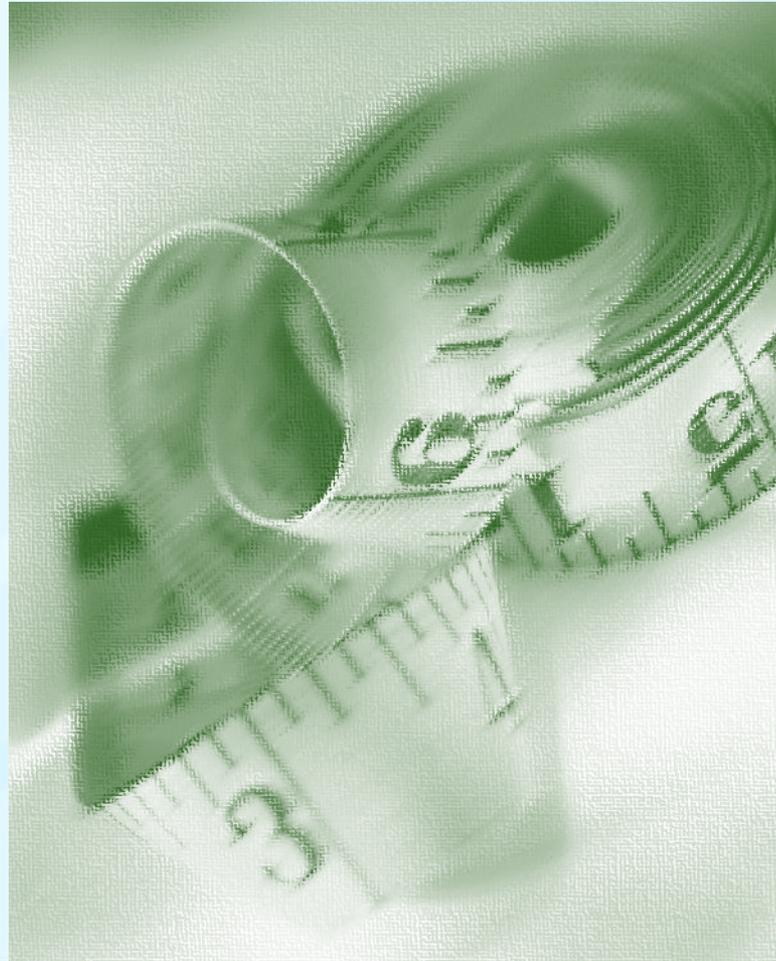
- ❑ **Recap of Presented Topics**
- ❑ **Meaningful Use Adoption by Public Health**
 - Why Measure Meaningful Use and Public Health Adoption
 - Relevant Terminology
 - Meaningful Use vs. Public Health Reality
 - Public Health Agency Meaningful Use Capabilities
 - Technical Profile – Electronic Lab Reporting
 - Metrics

Your Challenge During This Session: Summarize

- ❑ **The end of this session will include a small group discussion**
- ❑ **You will create a list of “top tips” for meaningful use adoption by public health**
- ❑ **Be ready to contribute “top tips” gleaned from this presentation**



Why Measure Meaningful Use and Public Health Adoption?



Why Measure Meaningful Use and Public Health Adoption?

- ❑ **Describes what public health investments have accomplished**
 - Immunization Registries (IIS)
 - Reportable Lab Results (Electronic Lab Reporting)
 - Syndromic Surveillance
- ❑ **Determine if public health is ready for Stage 1**
- ❑ **Respond to questions from non-public health stakeholders**
- ❑ **Justify why public health should be involved Stages 2-3**
- ❑ **Allows CDC to tailor its support for public health agencies**

RELEVANT TERMINOLOGY



Relevant Terminology (1 of 2)

Certification

- Process that electronic health records (EHRs) and modules go through to ensure they meet meaningful use objectives and specified standards.
- Standards for testing are published by National Institute of Standards and Technology (NIST).
- Certification process is performed by the Authorized Testing and Certification Bodies (ATCB).

Relevant Terminology (2 of 2)

Testing

- The eligible hospitals/eligible professionals (EP) exchange messages with public health agency (PHA) to get the correct format and values as determined by PHA

In Queue

- Follows successful testing
- Eligible hospitals/EP may be prioritized by PHA for validation at a later date

Validation

- Public health evaluation of new electronic data.
- Comparison with paper submission or previous electronic data flows

Production

- Data is continuously being sent to the PHA and is being monitored for quality assurance

**MEANINGFUL USE
VS.
PUBLIC HEALTH REALITY**

Meaningful Use Regulations vs. Public Health Reality (1 of 3)



- ❑ **When implementing systems, many PHAs have accommodated whatever format was available:**
 - Local codes, instead of Logical Observation Identifiers Names and Codes (LOINC)
 - Systematized Nomenclature of Medicine (SNOMED)

Meaningful Use Regulations vs. Public Health Reality (2 of 3)

- ❑ **Meaningful use currently doesn't consider how public health will receive data from eligible hospitals/ EP**
 - Putting eligible hospitals and EPs in queue
 - Validation of reporting data



Meaningful Use Regulations vs. Public Health Reality (3 of 3)

- ❑ **Medicaid/Medicare providers**
 - Same requirements, different timeline
- ❑ **Rules describe requirements of healthcare, not how PHAs should react or work with providers and hospitals**
- ❑ **Technical capability vs. capacity of public health**

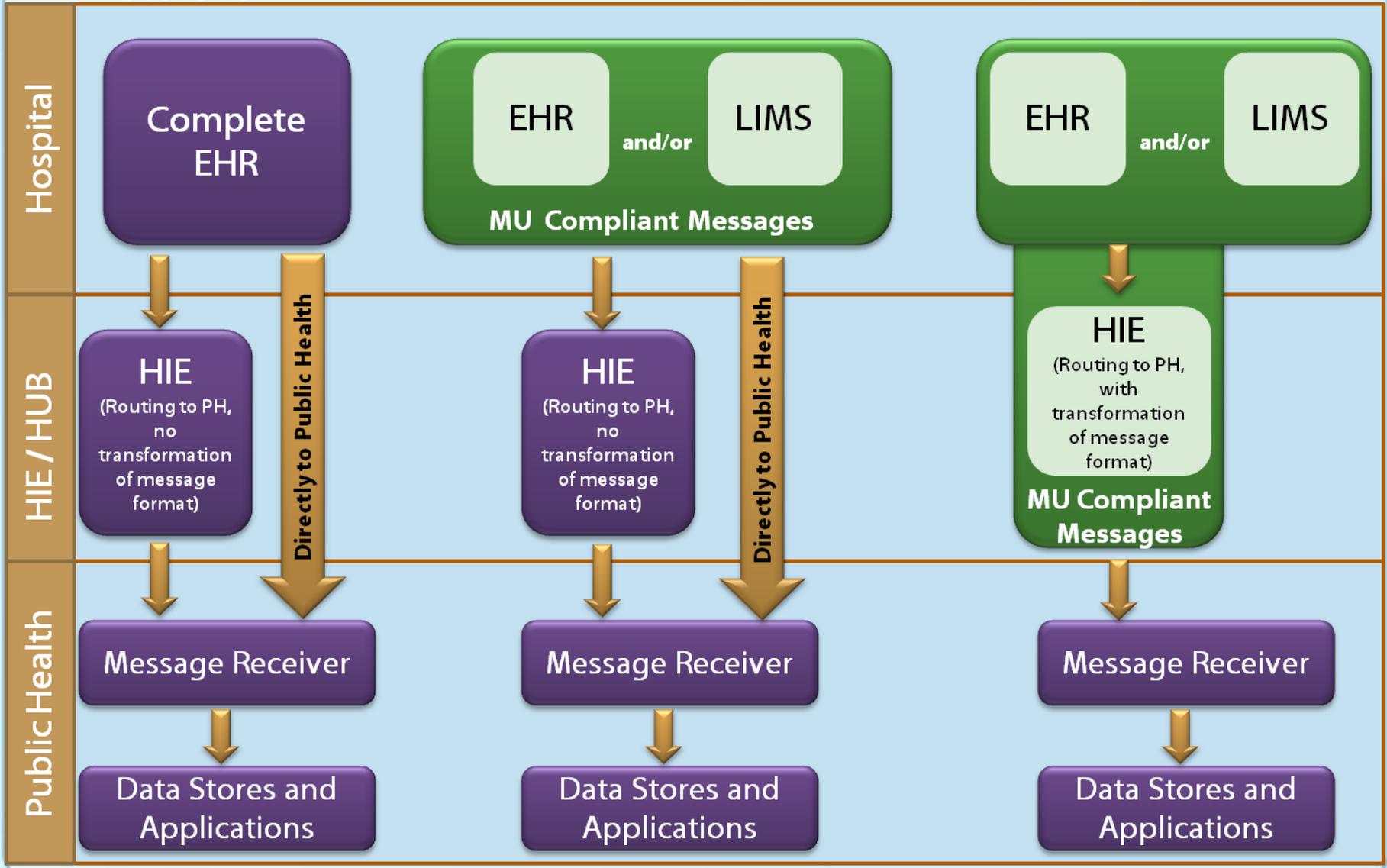
PUBLIC HEALTH AGENCY MEANINGFUL USE CAPABILITIES

Public Health Receiving Scenarios

Scenario 1

Scenario 2

Scenario 3



Eligible hospitals must certify all modules, since EHR is not performing all MU functions

Metrics to Describe PHA Meaningful Use Capability

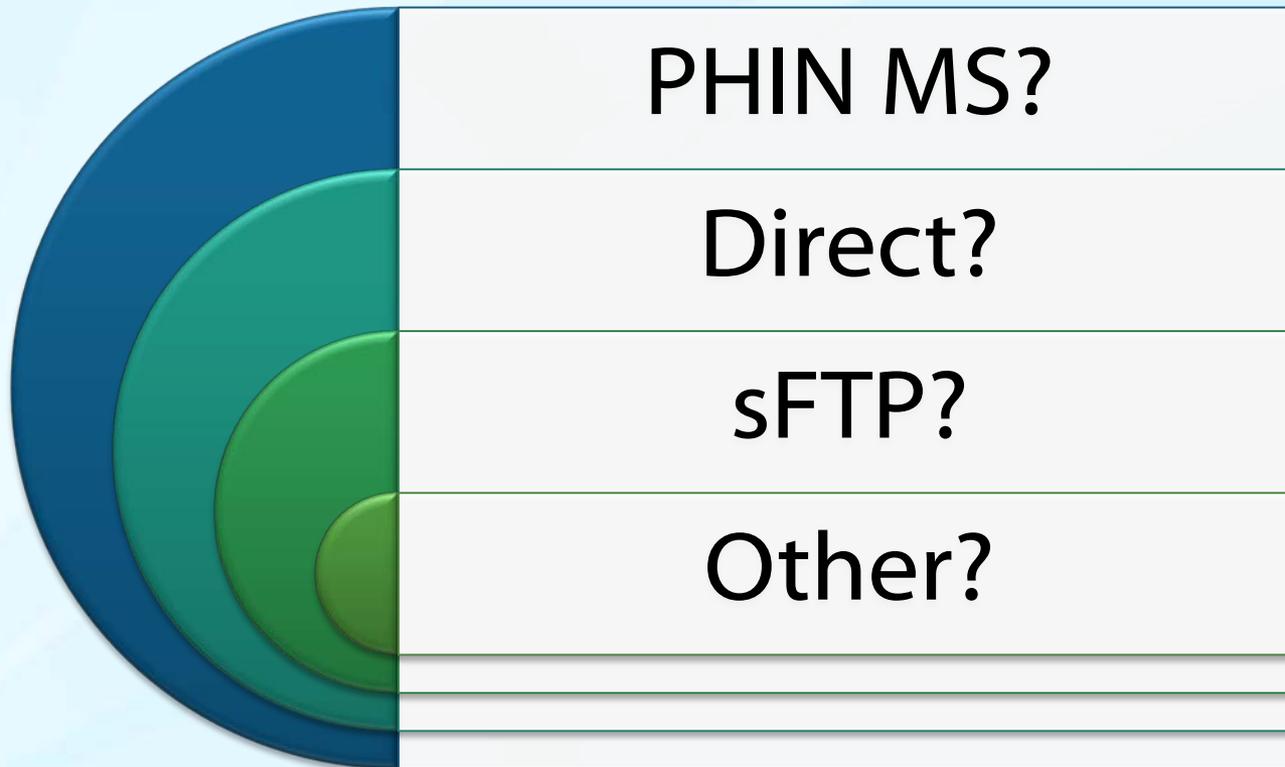
- ❑ **Can the state receive data for Immunization Information Systems (IIS), Electronic Lab Reporting (ELR) and Syndromic Surveillance (SS) in the ONC-prescribed format?**
- ❑ **If not ready, when will these systems be ready?**



TECHNICAL PROFILE - ELR

PHA's Technical ELR Profile (1 of 5)

- ❑ What transport mechanism is used for ELR?



PHA's Technical ELR Profile (2 of 5)



Routing Hub?



Health
Information
Exchange?

PHA's Technical ELR Profile (3 of 5)

- ❑ **What integration technologies are being used?**



PHA's Technical ELR Profile (4 of 5)

- **HL7 2.5.1 Messages for ELR**

Can the PHA
accept it?

Can the
surveillance
system
consume it?

PHA's Technical ELR Profile (5 of 5)

- ❑ Does the PHA use an HIE to convert an meaningful use-compliant HL7 message?



METRICS

PHA's Hospital Metrics for ELR

- ❑ **How many are in testing, production and in queue for validation or production?**
- ❑ **How many are currently in production with a format other than HL7 2.5.1?**



Who is Interested in These Metrics?

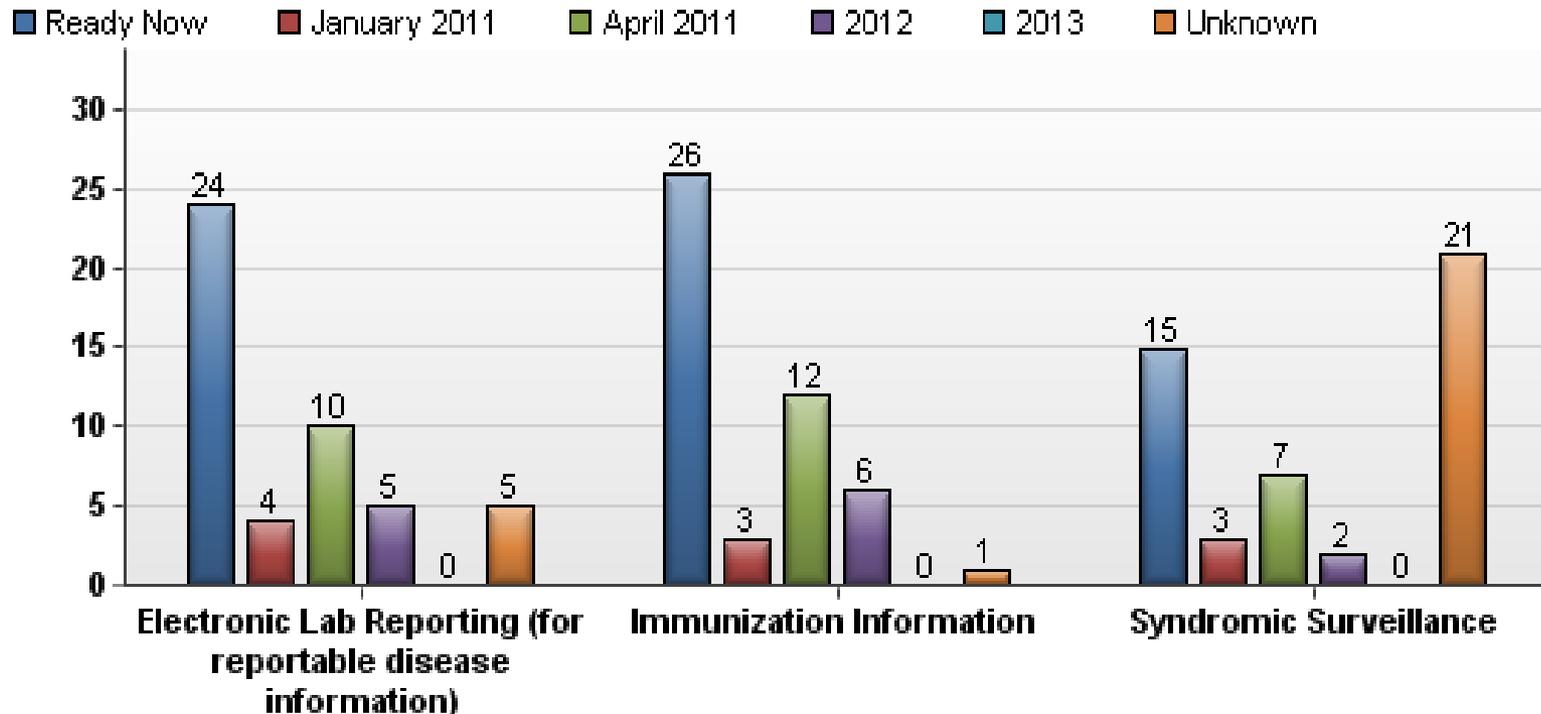
- 
- ❑ **CDC**
 - ❑ **ONC**
 - ❑ **Federal advisory committees**
 - ❑ **Public health representatives on advisory/standards setting committees**
 - ❑ **Public health associations- Association of Public Health Laboratories, ASTHO, Council of State and Territorial Epidemiologists, National Association of County and City Health Officials**
 - ❑ **State and local PHAs**

Where Do We Get Information to Support the Metrics?

- ❑ **ASTHO survey data provides the baseline**
- ❑ **CDC jurisdictional capabilities summaries**
- ❑ **Reports that are part of cooperative agreements**
 - Epidemiology and Laboratory Capacity
 - IIS-EHR Interoperability
- ❑ **BioSense redesign website and environmental Scan**

When Will Your Agency Be Ready to Receive Test Messages?

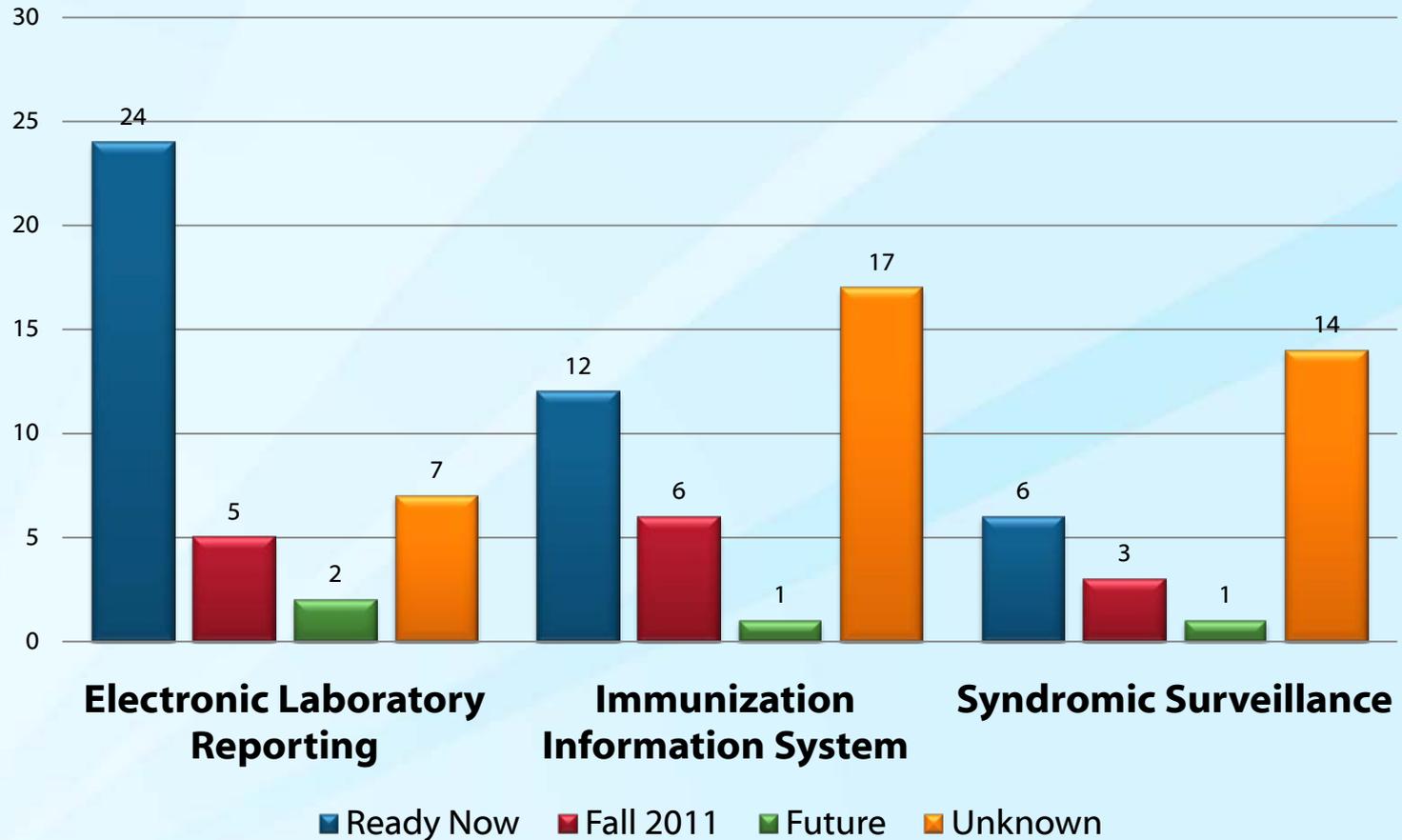
As of November 2010



Source: ASTHO Meaningful Use Readiness Survey 2010

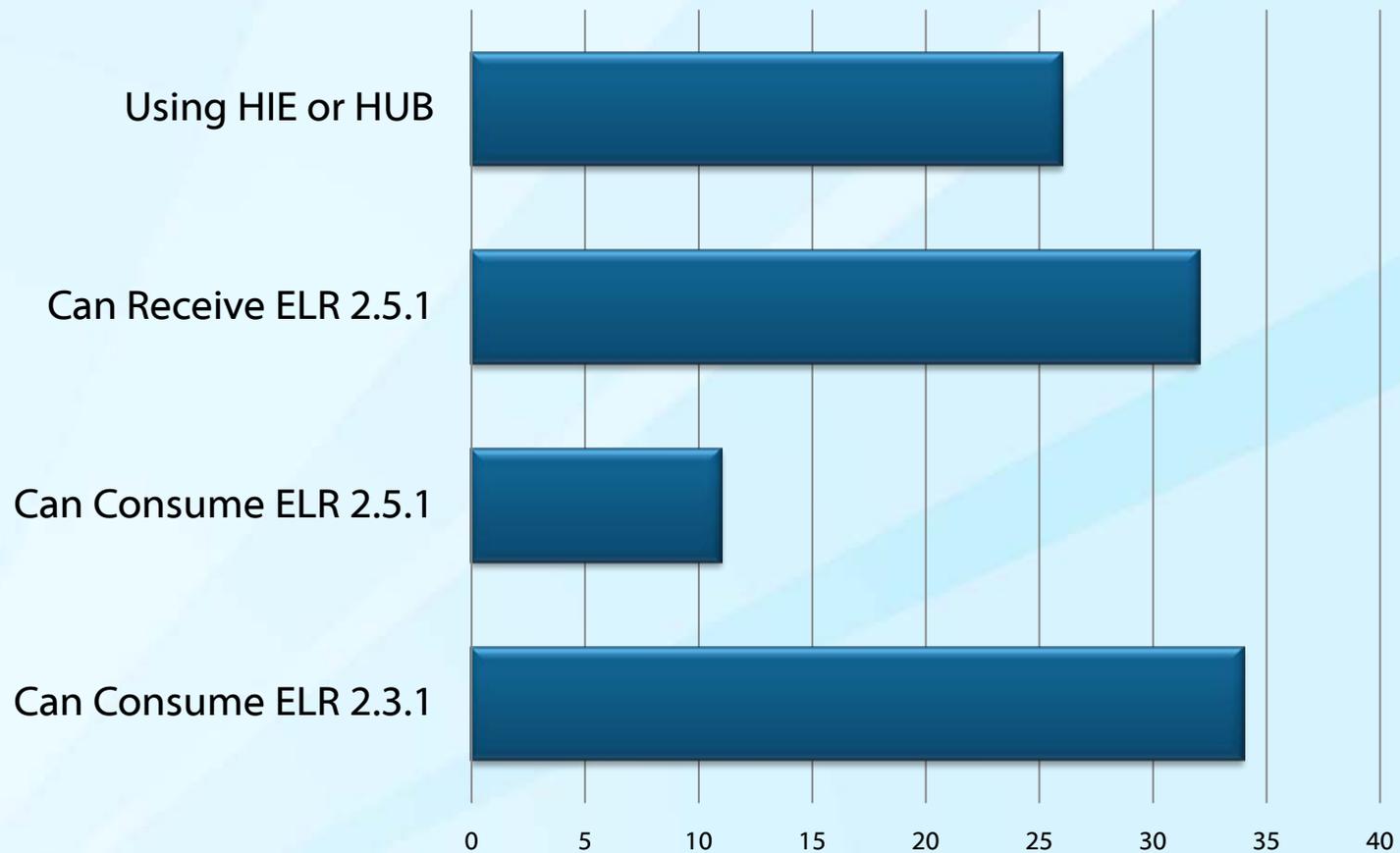
Readiness of PHA to Test for Meaningful Use

As of March 2011



Source: CDC Jurisdictional Capability Summary 2011

Additional Jurisdictional Metrics



n= 38

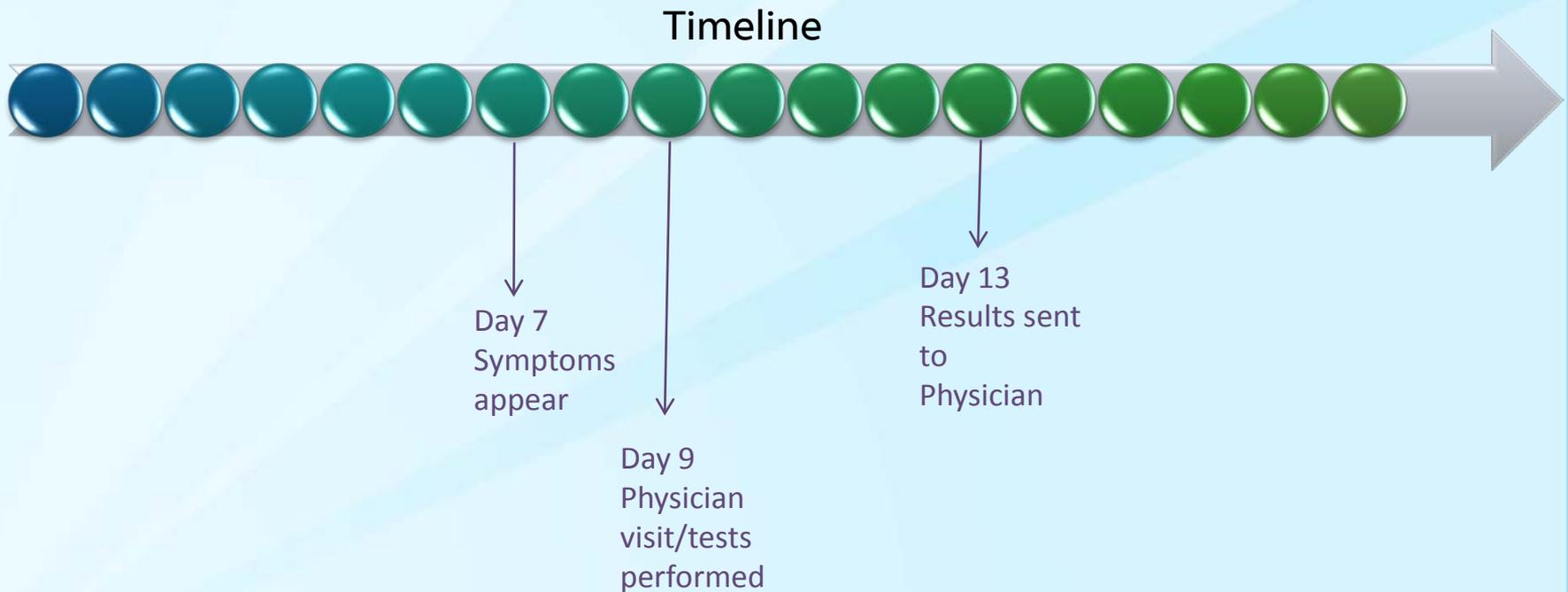
Source: CDC Jurisdictional Capability Summary 2011

Hepatitis A – Real World Example

MEANINGFUL USE IMPACT ON PUBLIC HEALTH

Hepatitis A Case in Food Handler

Pre-Meaningful Use



Hepatitis A Case in Food Handler

Pre-Meaningful Use

Massachusetts Department of Public Health
 Bureau of Communicable Disease Control
 Office of Integrated Surveillance and Informatics Services
 305 South Street, Jamaica Plain MA 02130
 Phone: 617-983-6801 Confidential Fax: 617-983-6813

Received in IDE: _____

HEPATITIS A
 For assistance filling out this form, call (617) 983-6800

CONFIDENTIAL CASE REPORT

Report Status: Confirmed Probable Suspect Revoked

DEMOGRAPHIC INFORMATION

Last Name: _____ First Name: _____ MI: _____
 Address: _____ Apt. #: _____
 City: _____ State: _____ Zip: _____
 Unique Address Condition: Homeless Incarcerated
 Contactphone: (____) _____-____ Occupation: _____
 Birth date: ____/____/____ Place of birth (e.g. specific country): _____
 Age: ____ Years Months Weeks Days Unk
 Sex: Female Male Transgender Unk
 Race (check all that apply):
 American Indian/Alaskan Native Asian Black/ African American
 Native Hawaiian/Pacific Islander White Other Unk
 Hispanic: Yes No Unk

CLINICAL INFORMATION

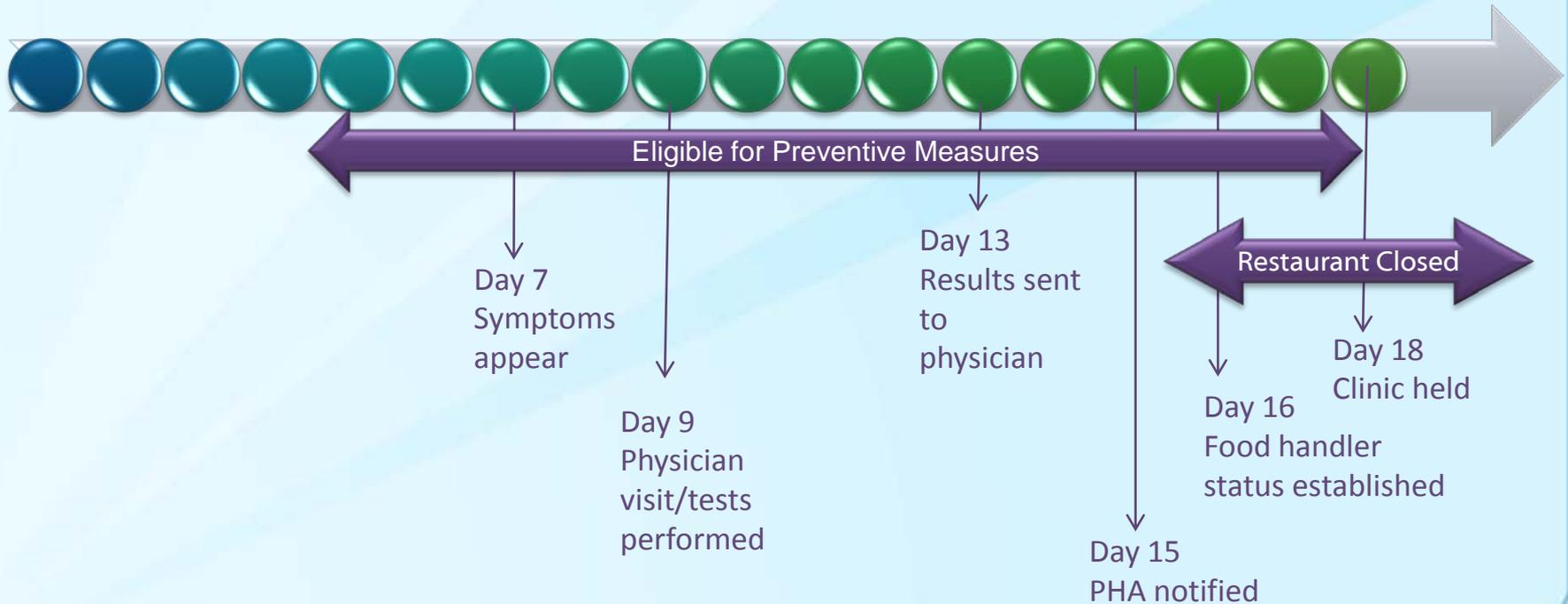
Diagnosis date: ____/____/____
 Did case have any symptoms? Yes No Unk Symptom onset date: ____/____/____
 Abdominal cramps Yes No Unk Anorexia Yes No Unk
 Chills Yes No Unk Dark urine Yes No Unk
 Diarrhea Yes No Unk Fatigue Yes No Unk
 Fever Yes (highest temp: ____°F/°C) No Unk
 Jaundice Yes (onset date: ____/____/____) No Unk
 Malaise Yes No Unk Nausea Yes No Unk
 Pale or clay colored stool Yes No Unk Vomiting Yes No Unk
 Other (specify): _____
 Case hospitalized? Yes No Unk Date hospitalized: ____/____/____
 Hospital name: _____ Date discharged: ____/____/____
 Outcome: Died Recovered Unk Date of death: ____/____/____
 Clinician name and address: _____
 Clinician phone: (____) _____-____ Patient record/chart #: _____

Case report and fax machine Up to 7 days



Hepatitis A Case in Food Handler

Pre-Meaningful Use



ELR

Event Information

Event Data	Lab Results	Concerns	Persons	Tasks	Event Properties	Event History Trail
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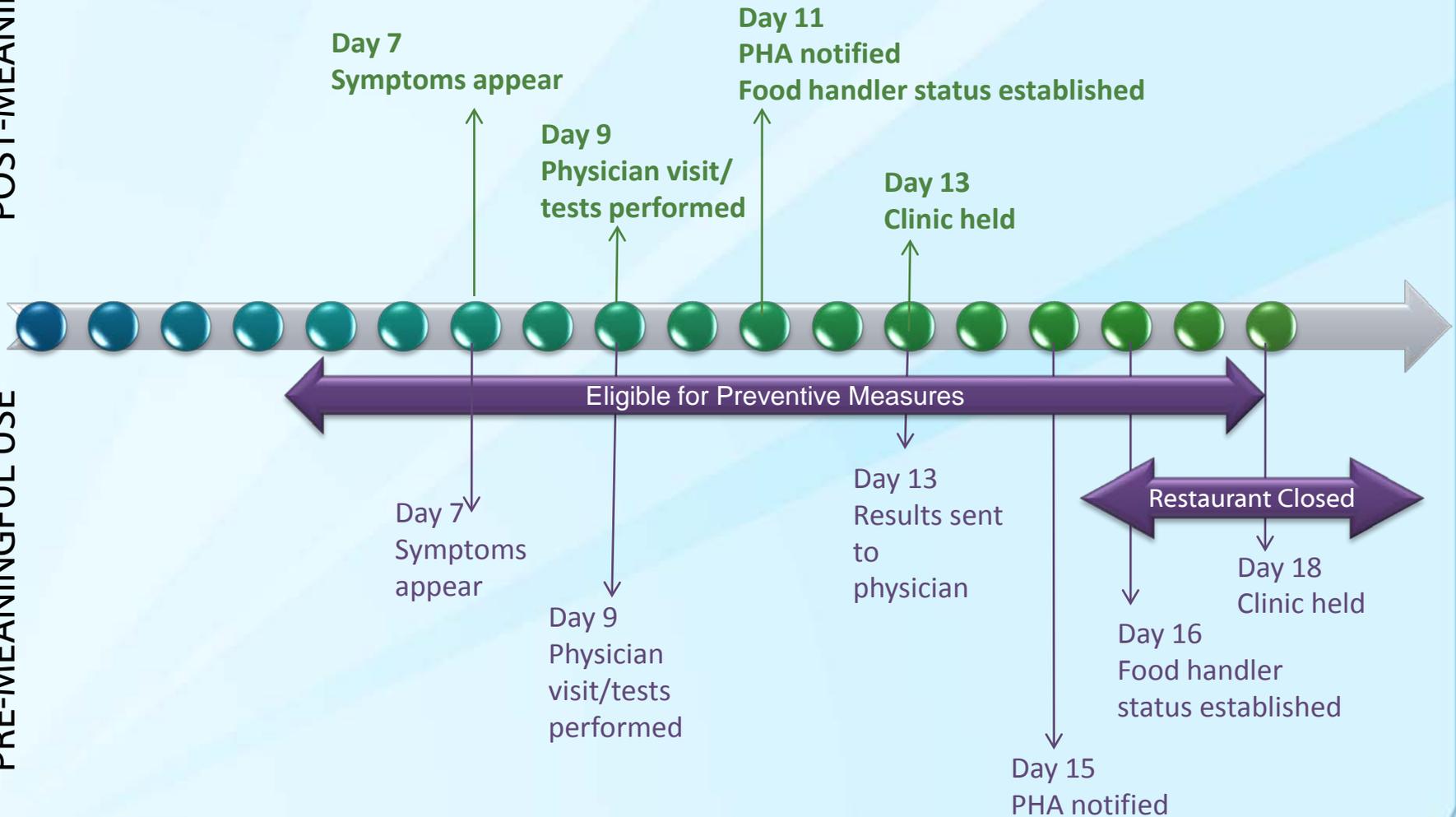
Labs	
LAB	LAST UPDATE
Spec Date: 01/02/2011 Spec Source: Whole blood sample Spec Number: 1234 Test: Hep A virus Ab IgM: ACnc: Pt: Ser: Ord: Result: Positive	01/10/2011

Details	
Lab Results:	Spec Date: 01/02/2011 Spec Source: Whole blood sample Spec Number: 1234 Test: Hep A virus Ab IgM: ACnc: Pt: Ser: Ord: Result: Positive
Last Update:	01/10/2011
Updated By:	jmalenfant
Results:	Details SpecimenInfo 01/02/2011, 1234, Whole blood sample Test Hep A virus Ab IgM: ACnc: Pt: Ser: Ord: Positive, 01/03/2011, 01/03/2011 Susceptibility LabFacility Baystate Medical Center - 759 Chestnut Street, Springfield, MA 01199, (413) 784-4500 OrderingFacility University of Massachusetts Health Services, 150 Infirmiry Way, Amherst, MA 01003 (413) 577-5154 OrderingProvider Dr. Davy Jones, UMASS Health Services, 150 Infirmiry Way, Amherst, MA, 01003, 999-999-9999 IsolateInfo SerotypeInfo Misc

Hepatitis A Case in Food Handler After Meaningful Use

POST-MEANINGFUL USE

PRE-MEANINGFUL USE



Workflow Queues - Epi Immediate Notification

[Select all](#) [Clear all](#)

Epi Immediate Notification (Type: Event)								
Event	Person	Status	Disease	Last Update	Assigned To	Assigned To Group	Team	
<input type="checkbox"/> Administrative (Event) TEST00006	Peter Griffin (N/A, N/A)	Open	Anthrax	07/17/2006			N/A	
<input type="checkbox"/> Administrative (Event) 100000007	Tom Sawyer (Holyoke, MA) ←	Open	Hep A	07/17/2006			1	
<input type="checkbox"/> Administrative (Event) TEST00004	Jane Smith (Boston, MA)	Open	GAS	07/17/2006			4	
<input type="checkbox"/> Administrative (Event) TEST00005	Shawn Campbell (Cambridge, MD)	Open	Hep A	07/17/2006			6	

Assign selected items to user: Assign selected items to group:

Information Sharing (Notes/Tasks)

Maven Disease Surveillance Suite

Help



Event: 10000204: Tom Sawyer - Hepatitis A

Unload Event Logged in as

Event Summary

Basic Information

Event ID:	10000204
Disease:	Hepatitis A
Primary Person:	Tom Sawyer Birth Date: 01/27/1972 (Male) Phone: (617) 698-3698
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) View
Attachments:	2 attachment(s) Add View
Notifications:	Age unit is Years Event Date is 06/15/2007 Age at time of event is 35.41 Event Type is REPORT_DATE Classification Status is SUSPECT

Notes (Edit | All Mine) Tasks (All Mine)

Type	Status	Assigned To	Assigned To Group	Description
Assignment	Pending	eharvey		Is he a foodhandler? Called LBOH to find out

Edit Event Properties

Event Information

Event Data	Lab Results	Concerns	Persons	Event Properties	Event Audit Trail
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Question Packages

QUESTION PACKAGE	PERSON	LAST UPDATE
1. Administrative	EVENT	06/20/2007
2. Demographic	Tom Sawyer	06/15/2007

2. Demographic Package, [Tom Sawyer](#) Hepatitis A

Event ID: T100000204

Address Information (Address information below conforms to address when first reported)			
Street address:	<input type="text" value="369 Smither Street"/>		
City:	<input type="text" value="Holyoke"/>	Official City:	<input type="text" value="HOLYOKE"/>
State:	<input type="text" value="MA"/>		
Zip code	<input type="text" value="01894"/>	Country:	<input type="text"/>
Select Contact Point			
Unique address condition:	<input type="text"/>		
Patient telephone # (home):	<input type="text" value="(617) 698-3698"/>	Patient telephone # (work):	<input type="text"/>
Employment Information			
Employer name:	<input type="text"/>	Employer telephone #:	<input type="text"/>
Employer address:	<input type="text"/>	Employer city:	<input type="text"/>
Employer state:	<input type="text"/>	Employer zip code:	<input type="text"/>
Occupation:	<input type="text"/>		
Demographic Information			
Birth date:	<input type="text" value="01/27/1972"/>		
Place of birth (country):	<input type="text"/>		
Age:	<input type="text" value="35"/>	Age type:	<input type="text" value="Years"/>
Gender:	<input type="text" value="Male"/>		
Race:	<input type="text"/>		
Is case Hispanic?	<input type="text"/>		
Next of kin notes:	<input type="text"/>		

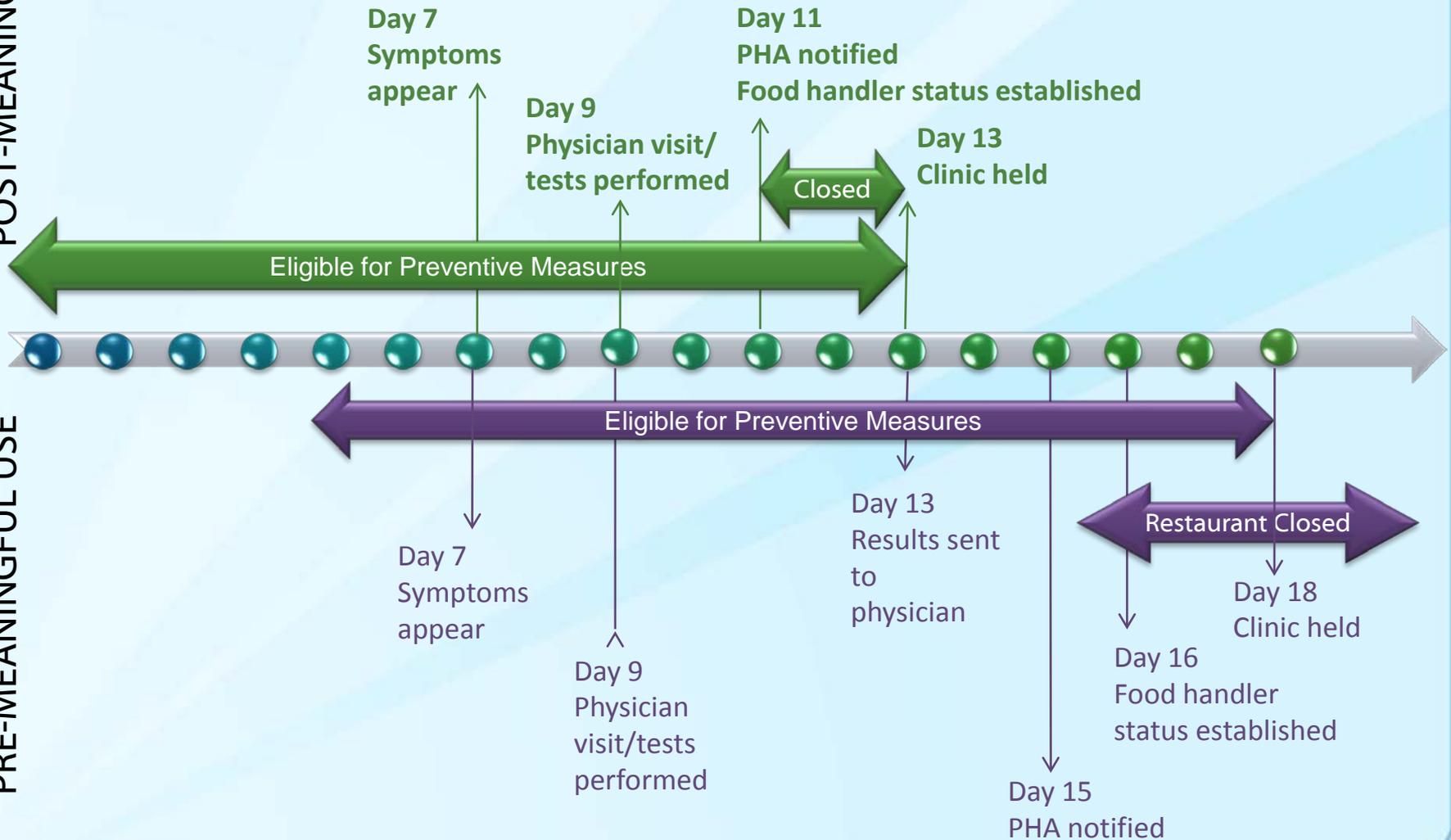
3. Clinical Package, [Tom Sawyer](#) Hepatitis A

Diagnosis/Clinical Information	
Diagnosis date:	<input type="text"/> 
The period of infectivity for Hepatitis A begins two weeks before symptom onset and continues for one week after symptom onset.	
Infectious period start date:	<input type="text"/> 
Infectious period stop date:	<input type="text"/> 
Did case have symptoms?	<input type="text" value="Yes"/>
Symptom onset date:	<input type="text"/> 
Abdominal cramps:	<input type="text"/>
Anorexia:	<input type="text"/>
Chills:	<input type="text"/>
Dark urine:	<input type="text"/>
Diarrhea:	<input type="text"/>
Fatigue:	<input type="text"/>
Fever:	<input type="text"/>
Jaundice:	<input type="text"/>
Malaise:	<input type="text"/>
Nausea:	<input type="text"/>

Hepatitis A Case in Food Handler After Meaningful Use

POST-MEANINGFUL USE

PRE-MEANINGFUL USE



Immunization Information System

Maven Integrated Public Health Information System

Open Help



Unload Event Logged

Immunization Record

Basic Information

Event ID: 300000493
 Client: [Wally Waiter](#) Birth Date: 04/03/1975 (36 yrs 0 mos 17 dys Male) Phone:
 Attachments: 0 attachment(s) ([Add](#))
 Immunization Summary, Forecast & Schedules: [0-6 yrs Schedule](#) [7-18 yrs Schedule](#) [Catch-up Schedule](#) [Simplified Routine Vaccine Schedule](#)
[Immunization Certificate](#) [Immunization Summary](#)
[Immunization Forecast](#)
 Recommended Groups: **MMR, Td/Tdap, Varicella**

Notes (Add/Edit | Show My Notes)

Edit Event Properties

Event Information

Client Info

Lab Results

Question Packages

- QUESTION PACKAGE
- 01. Immunization Administration
- 02. Clinical Comments
- 03. Demographics, Insurance and Visit Sch
- 04. Immunization Detailed History

View Question Package

Vaccine Administration Record - Windows Internet Explorer

http://demo1.consiliencesoftware.com/maven3/createVAF

Client Summary - Wally Waiter

Birth Date: 04/03/1975 (36 Years) Address: 123 Main Street, Dalton, MA
 VFC Eligible: Unknown Recommended Groups: **MMR, Td/Tdap, Varicella**

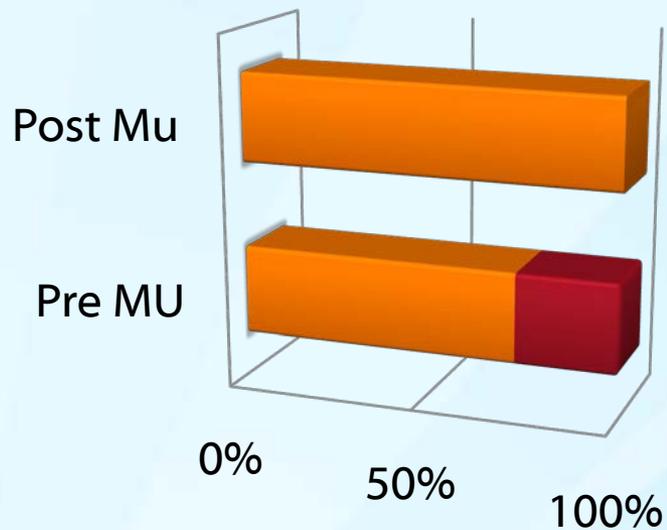
Immunization Summary	1	2	3	4	5	6	7
Routine Vaccines							
DTP/aP							
Hib							
HepA	01/01/2010	07/09/2010					
HepB							
HPV							
Influenza							
MCV							
MMR							
MPSV							
PCV							
Pneumo-Poly							
Polio							
Rotavirus							
Tdap							
Td							
Varicella							

Other vaccine(s):

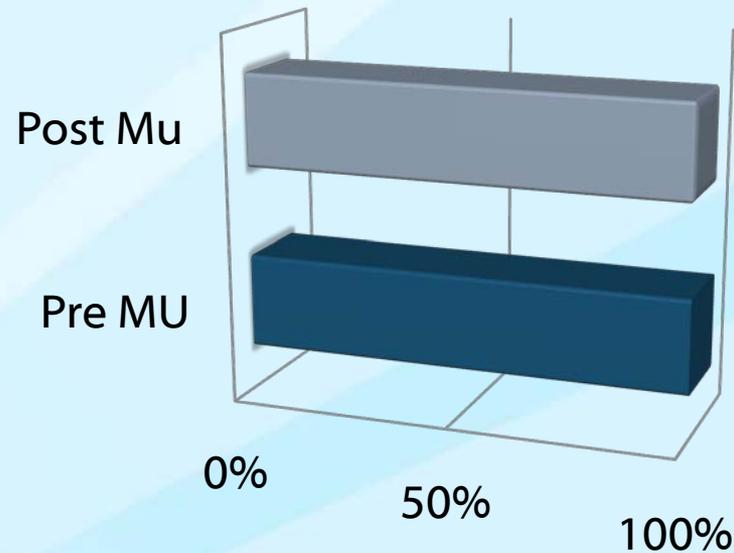
javascript:switchPage('viewReport.do');

Internet 100%

Two Scenarios



	Pre MU	Post MU
Customers with preventative measures 	1100	1500
Customers without preventative measures 	400	0



	Pre MU	Post MU
Employees excluded 	20	0
Employees not excluded 	0	20

Resources

- ❑ **CDC Meaningful Use Webpage-**
<http://www.cdc.gov/ehrmeaningfuluse/>
- ❑ **ONC List of Certified EHRs-** <http://onc-chpl.force.com/ehrcert>
- ❑ **ONC Certification Standards-**
http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov_standards_and_certification/1153
- ❑ **CMS Meaningful Use Incentive Program-**
<https://www.cms.gov/EHRIncentivePrograms/>

Your Challenge During This Session: Summarize

- ❑ Find two partners. Agree on “top two tips.”
- ❑ Combine with another group of three. Agree on “top two tips.”
- ❑ Write one tip on each large post-it, and place them on the wall.



